In the Specification:

Please amend the specification as follows:

Page 1, after the title insert:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority to Swedish patent application 0300409-0 filed 13 February 2003 and is the national phase under 35 U.S.C. § 371 of PCT/SE2003/002003 filed 17 December 2003.

Paragraph bridging pages 11 and 12:

Fig. 1 shows an example of a system for programming an indus- trial robot according to the invention. The system comprises an industrial robot 1, from now on denoted the robot, which comprises a manipulator 2, and a control system 3 for controlling the movements of the robot. The control system comprises a model of the kinematic of the robot. The system further comprises a work object 4, on which the robot is about to perform some kind of process, for example welding, painting or grinding. Further, the system comprises a computer 5, in which the software of the invention is stored, and in which the software is executed. The robot, as shown in the figure, is an industrial robot having six axes, and comprising a base 7 fixedly mounted on a foundation and a stand 8, which is rotatable in relation to the base about a first

axis. In the upper end of the stand, a first robot arm 9 is rotateably mounted in relation to the stand about a second axes. In the outer end of the first arm, a second arm 10 is rotatably mounted in relation to the first arm about a third axes. The second robot arm comprises two parts, wherein the outer part is rotateable in a relation to the inner part about a fourth axes. The second arm 10 carries in its outer end a tilt member 11, which is rotatable about a fifth axes. The robot also comprises a tool holder 12, which is rotatable in relation to the tilt member about a sixth axes.

Page 15, first paragraph:

Fig. 3 shows some definitions for object classification. The object ~~34~~ 4 has a plurality of object surfaces 20, and a plurality of edge lines 21. On the object surface there are a plurality of measuring points 22 indicated with cross. In the figure an object coordinate system 23 is shown. The object coordinate system is connected to the object, and all points on the object are related to the object coordinate system.

Paragraph bridging pages 21 and 22:

Fig. 8 shows the compensation of a robot path 60, programmed in the CAD model, where the path is compensated for errors in two directions. In the figure, a first object surface 40 is shown, and a second object surface 64, neighboring to the first object surface. An edge line 65 divides the object surface 40 and the object surface ~~62~~ 64. The edge line 65 is the intersection between the object surfaces 40 and 64. In the CAD model there is an edge line 66 corresponding to the

edge line 65. The edge line 66 in the CAD model is adjusted to be in accordance with a corresponding edge line on the object. The adjusting of the edge line 66 is based on the correction vectors 67 and 68 of neighboring subsurfaces in the object surfaces 40 and 64. The edge line adjusted in such a way is denoted 69 in the figure. The path 60, programmed in the CAD model, is compensated in dependence of the average error in the normal direction of the subsurface of the objective surface 40, i.e. the correction vector 67, and the average error in the plane of the subsurface given by the average error of the closest subsurface ~~e~~ of the object surface 64, projected on the subsurface in the object surface 40, i.e. the correction vector 68. In that way the path will be compensated for errors in two directions.

Page 22, first paragraph:

Fig. 9 shows how a robot path 82, programmed in the CAD model, is compensated for errors in three directions. An edge line 76 is calculated as the intersection between the object surface 40 and an object surface 74. An edge line 78 is calculated as the intersection between the object surface 40 and the object surface 64. Adjusted edge lines 80 are calculated in dependence of the correction vectors of neighboring subsurfaces in the object surfaces 40, 64 and 74. In the figure, the compensated path ~~80~~ 84 is shown, which is compensated for errors in three directions. The correction vectors can either be obtained from neighboring object surfaces, or neighboring edge lines.